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WITH HISTORY OF CASES



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# Hypertrophy of the Tonsil of the Tongue,

*WITH HISTORY OF CASES.<sup>1</sup>*

By J. W. GLEITSMANN, M.D.,

PROFESSOR OF LARYNGOLOGY AND RHINOLOGY, NEW YORK POLYCLINIC.

THE affection which forms the subject of my paper does not receive the attention it well deserves. It is often an unrecognized source of a variety of complaints, which are only successfully relieved by treatment of the glandular hypertrophy in question. Although numerous researches have revealed the true pathological character and the microscopic constituents of the diseased tissue, very few writers have given a description of its clinical features, and the majority of publications confine themselves to an enumeration of one or the other prominent symptom of the individual case. As I had occasion to treat a number of cases during this year, I beg to submit the result of my observations to the meeting.

The tonsil of the tongue consists of a group of follicular glands, similar to those of the faucial and pharyngeal tonsil, and forms the connecting link of the great lymphatic ring of the pharynx. Commencing at the pharyngeal tonsil, this ring extends to the orifice of the Eustachian tube, then turning downward along the posterior surface of the soft palate to the faucial tonsil, it reaches the base of the tongue, and returns in the same

<sup>1</sup> Read before the Section on Laryngology and Rhinology of the New York Academy of Medicine, November 22, 1887.



order. The ring has an almost vertical position, and is characterized by an accumulation of follicular glands in several places. The glands are found in two different forms; in some localities they appear in aggregated, in others in disseminated form. When they are aggregated they represent a circumscribed mass, which is commonly called a tonsil. Other attributes of a tonsil are a dense, diffuse infiltration of the connective tissue with lymph-cells, and the prevalence of follicular, or, as Cohen better calls them, saccular glands. While these three conditions exist in the faucial and pharyngeal tonsil, the tonsil of the Eustachian tube and of the tongue have not the circumscribed form, and contain the follicular glands in the disseminated state. But cases are not rare in which the accumulation of these glands assumes a formidable, well-defined shape, and the Eustachian tonsil has been known as such for some time. The name, tonsil of the tongue, has, as I think, been used with perfect propriety by some writers for a similar condition at the base of this organ. Without further entering into the histology of these formations, it is well to remember that they are not glands in the common sense. They have no excretory duct nor outlet, are closed bodies, and by their function belong to the lymphatic system. They are of the size of a lentil, are loosely embedded in the submucous tissue, and their hilus is covered by a thin mucous membrane. Their sac contains a varying number of follicles, closely resembling those of Peyer's glands of the intestines.

According to the researches of Swain, who has given so far the best description of our subject, the existence of these glands at the base of the tongue is a normal condition. They are located between the papillæ circumvallatæ and the epiglottis, often encroaching on both, and they generally appear at the period of puberty. In the hypertrophic state their growth is uniform, and all the parts of the gland take part in it. The whole gland is enlarged twice its size, and more; the follicles them-

selves become considerably larger. This hyperplasia resembles closely the condition observed in chronic hypertrophy of the faucial tonsil, and is another instance of similarity of these two organs.

I am unable to give a satisfactory explanation of the causes productive of this disease. My patients, as well as those of others, had attained the age of puberty, the majority of them being between twenty and forty years of age. Aside from the knowledge of an ailment which made them seek medical aid, they were unaware of the condition existing in their throat, and greatly surprised when informed of the nature of the trouble. In my opinion the same agencies are most likely at work which bring on hypertrophy of the faucial tonsil, with the difference of their appearance at a later age of the patient.

The symptoms we observe in patients are manifold, but mainly due to the mechanical irritation brought on by the hypertrophic glands. Some of these symptoms have already been described, and we are indebted to two members of our Section for having pointed out two of the most important ones. Dr. Rice has given a very graphic illustration how a severe spasmodic cough can be completely relieved by proper reduction of these glands, and Dr. H. Curtis related his experience of their influence on the singing voice. Dr. Curtis was, as far as I know, the first to have drawn attention to these growths from a clinical stand-point. But besides these two symptoms we notice an array of others, and we shall now investigate them more fully. We hear the patients complain—1, of the sensation of a foreign body or of pressure in their throat; 2, of interference with their speaking or singing; 3, of pain when there is subacute inflammation of the glands; 4, of radiating pain; 5, of cough; 6, of asthmatic attacks.

The first symptom I found to be the most constant one. The existence of a mass of hypertrophic tissue at the base of the tongue creates the feeling of the presence

of a foreign body, and the patient endeavors to remove it by swallowing. This is the cause of the so-called empty-swallowing, which is often incessantly repeated with but temporary relief. This sensation is experienced less during eating, and generally only when no food is taken. It is next to impossible to enumerate all the foreign substances which the patients believe to be present. All imaginable things, from a leaden ball to a hair, are given as the source of the evil. In this connection it will not be amiss to state that quite a number of cases of globus hystericus can be satisfactorily explained by the hypertrophy of these glands, and cured by their destruction. The sensation of pressure in the throat is in the same manner due to the enlarged glands, and aggravated when there is actual contact between the epiglottis and the tongue. Nervous patients become more and more irritated by the foreign body and the pressure they feel in their throat, and very often experience great suffering.

The interference with speech and song is probably the most interesting symptom of our disease. In some cases the patients only tire out very soon when using their voice, in others the voice is entirely lost. There are instances known where the voice is good one day, bad the next, and where it breaks suddenly during singing. Professionals also say that they are no longer able to find the right key, or that the voice has lost a great deal of clearness and metal.

The only complaint of other patients is that they have pain while talking, without being hoarse. I refer now only to patients who have no concomitant disease, as, for instance, catarrhal laryngitis, granular pharyngitis, or to such whose ailment continued unabated after hypertrophic faucial tonsils, or granulations of the pharynx, or the like had been effectively treated. If the hypertrophy of the glands is so great as to overlap the free border of the epiglottis, the explanation of their influence on the voice is easy. In this case the free movement of the



epiglottis is seriously interfered with, and the constant exertion necessary to produce a sound creates a feeling of fatigue. If there is no impingement of the epiglottis and simple contact with the tongue, we have to remember that the position of the tongue and larynx change with each articulation. When the follicular glands are swollen the epiglottis is exposed to friction with each movement, its nerves become irritated, and this irritation is transmitted to the muscles and nerves of the larynx. In some cases the fatigue of voice can be traced to deficient innervation.

Although the enlarged condition of the follicular glands is decidedly a chronic process, subacute inflammation does sometimes occur. Patients who formerly complained only of discomfort in swallowing, or of pressure in their throat, suffer actual pain when an inflammatory exudation of fibrinous material into the follicles takes place. In a lady under observation, who only had the sensation of a foreign body in her throat, the glands were moderately enlarged without touching the epiglottis. After most of them had been reduced by the galvano-cautery she appeared one day suffering severe pain in her throat, which she considered due to a cold. On inspection numerous white spots, of the size of a pin's head, could be seen, covering the entire base of the tongue, and resembling closely the aspect we are wont to see in follicular tonsillitis. It took very persistent scraping with the sharp spoon, and repeated insertions of a fine galvano-cautery point into the diseased follicles to make the inflammatory symptoms disappear.

Radiating pains toward other parts of the body I noticed only in one patient. She complained of shooting pains toward each side of the throat, extending upward to the ears. Destruction of the hypertrophic glands gave prompt and complete relief. Cases are described in which patients felt pain between the shoulder-blades, in the larynx, trachea, also in the stomach.

Quite a number of patients suffer from cough, which is

observed in two different forms. It is either a violent, spasmodic, almost incessant, or a hacking cough, appearing at shorter or longer intervals. The spasmodic form, as a rule, occurs when the hypertrophic glands encroach upon the epiglottis, and is less frequent than the hacking cough. The latter often gives rise to great anxiety on the part of the patient and his relatives, as they fear it to be a symptom of developing phthisis of the lungs. In the cases under my observation this form of cough was present when there was merely contact between the glands and the epiglottis, and it is most probably due to the friction of the tongue and epiglottis against each other during their movements.

Finally, the last symptom to be mentioned are asthmatic attacks. Although I have not seen any case myself, Heyman and Seifert describe attacks of dyspnoea, resembling asthma, in patients with enlarged follicular glands. So far the observations are very few in number, but it will be advisable, in the future, to examine closely the base of the tongue before we consider a case of asthma as one of purely nervous origin.

To illustrate more fully the symptoms alluded to, and their great variety, I append the histories of a few patients :

CASE I.—Mrs. R——, married, aged twenty-nine, professional singer. She had been performing in concerts and opera on the Continent and in this country. Her voice had never failed her, and although subjecting it sometimes to an unusual strain, she never felt any discomfort afterward. About one year ago she began to feel easily fatigued when singing any length of time, and when continuing she could only do so by great exertion. Of late she noticed, on several occasions, that in making such an exertion she would lose control over her voice, and it broke completely. She also complained of a slight sensation of pressure in her throat. The patient was otherwise perfectly healthy, but very downcast on account of the fear of never regaining her full vocal power.



At the examination the whole upper air-tract was found to be normal, except a few patches of granular tissue in the pharynx, and moderately enlarged follicular glands, which, however, did not interfere with the movements of the epiglottis. Not fully appreciating the importance of this condition at the time, I was greatly surprised when, after destruction of the granulations, but slight improvement was obtained. Permanent benefit only resulted from a methodic, and, in this case, especially persistent, treatment of the follicular hypertrophy. The means adopted in this and other instances I shall summarize when speaking of the treatment.

CASE II.—Mrs. G——, married, aged thirty-seven, complained of a dryness and burning in her throat for the past four weeks, obliging her to drink very often. She also has the sensation of a string lying on the back of her tongue, which she in vain tries to get rid of by frequent attempts at deglutition. When she takes food this feeling is less, but after she has swallowed a mouthful some particles of food seem to remain on the tongue, and the fruitless efforts at swallowing commence again. During the last week she was also greatly annoyed by pain in both ears, which, although of short duration and coming at long intervals, was nevertheless very acute and painful.

A minute inspection revealed nothing but the presence of a circumscribed mass of follicular glands right in the middle of the base of the tongue, slightly covering the edge of the epiglottis. Three applications with different agents gave complete relief.

CASE III.—W——, male, aged twenty-seven, amateur singer; suffers since ten years from what he calls "catarrh;" which, however, did not materially affect his singing power. About two months before presenting himself for treatment he found that his voice became less clear; it varied very much; was better one day, worse the next, but never as good as before. It was a much greater effort for him to sing, and he tired out when he continued,

and had actual pain in the throat when he persisted. At the same time he had a feeling as if a hard substance was present in his throat which necessitated frequent swallowing.

The patient had a considerable hypertrophy of the anterior portion of both middle turbinated bodies. They were snared off and relieved his catarrh. The follicular glands covered the base of the tongue rather uniformly, and it required treatment extending over two months to reduce them to their normal condition, and thereby to restore his voice to its former quality.

CASE IV.—The last case I have selected from my notebook appears to me most interesting, and instructive at the same time. Miss J——, aged twenty-eight, was brought to my office by her mother, in a state of great anxiety, because the young lady was believed to be a victim of pulmonary phthisis. The patient had not lost much flesh, but she looked pale, anæmic, and was very weak, not having had one good night's rest for several weeks on account of her harassing cough. She had been under treatment before, and her chest had been pronounced "weak." Six years previously she had been treated for some aural disease, and later for a throat trouble, the exact nature of which I could not ascertain. On being questioned she said that for quite a long time she felt as though she must frequently swallow in order to overcome a raw, scratching feeling in her throat.

Most careful and repeated examination of her chest gave no evidence of pulmonary disease. Very slight granulations were present in her pharynx, but their destruction did not in the least relieve her cough. The follicular glands were, in her case, hypertrophied to such an extent as I have never seen since. There was a thick dense mass of hypertrophic tissue extending over the whole base of the tongue, and covering the free border of the epiglottis completely. This mass was divided by longitudinal furrows, the deepest of which, centrally located, divided the whole tissue in two symmetrical

halves. I began the treatment by snaring off each half with my platinum-iridium cautery-snare, and reduced the remaining tissue by repeated insertions of the cautery-knife. Improvement began immediately after the two parts I beg to show you here had been snared off, and, although the treatment extended over six weeks, no other means were employed, and a perfect cure was effected.

From the foregoing you will see, gentlemen, that the disease in question presents a great variety of symptoms. I purposely refrained from enumerating in detail all the different complaints patients have to make. I only endeavored to give the chief features we observe, without becoming tiresome. One point more, I think, is well worth dwelling upon. Although there are quite a number of people with enlarged glands who have no abnormal sensation, and therefore are not objects for treatment, we certainly have to look upon the hypertrophy of the tonsil of the tongue as another source of ailment of the upper air-tract which merits our undivided attention. It is not necessary to state, in an assembly like the one before me, that recent experience has taught us not to rest contented until we have found an anatomical basis for any neurotic symptoms the patient may suffer from. It is our endeavor to localize disease, and as long as we do not find the true cause our line of treatment is more or less without proper foundation. The symptoms enumerated above are not pathognostic of our disease, and without local examination a positive diagnosis cannot be made. If, therefore, in a given case, after a thorough examination of the usual localities, we find no definite cause for a certain train of symptoms, our attention should be directed to the base of the tongue before we assume a simple neurosis. The inspection of this organ requires no special manipulation, but it is easily seen in its full size when examining the larynx. As a rule, we are so accustomed to look at once into the larynx, and for the possible changes of its structure, that it will only



need this suggestion to make the examination complete. When we are in doubt as to the locality giving rise to the abnormal sensations, we can avail ourselves of the action of cocaine, which arrests the reflex irritability, and thereby facilitates the diagnosis.

The prognosis is favorable, as well in regard to the disease itself as to the concomitant symptoms. Still I have found it difficult to pass judgment beforehand as to the time necessary for a cure, and in the beginning was more than once disappointed by giving a hasty opinion. They are not always the large hypertrophies which require most time for treatment; sometimes the reduction of a smaller but broader hypertrophic mass taxes the endurance of the patient and the resources of the physician a great deal more.

The line of treatment to be pursued is well marked out, and consists in reduction or destruction of the redundant tissue. Simple pressure with a cotton-carrier, applications of chromic acid, or of Vienna paste, have been recommended. My experience is limited to four remedial agents: Lugol's solution of different strength, nitrate of silver fused to a probe, the galvano-cautery, and, finally, the snare.

Lugol's solution is applied with the common laryngeal applicator, bent at a more obtuse angle and then introduced between the base of the tongue and the epiglottis. Although praised very highly by others, it has not proven so effective in my hands, and I now use it only in light cases or when patients object to the cautery. As one of its advantages I found in quite a number of cases that the patient feels at least temporary relief from his abnormal sensation immediately after the application. Lunar caustic is best adapted for cases in which the hypertrophic tissue is of a soft character and not so dense and compact as we usually find it. My best results I have obtained by means of the galvano-cautery, with which I make repeated scarifications into the follicular glands, and which acts here in a similar manner as when used for hy-

pertrophy of the faucial tonsil. When there is contact between the epiglottis and tongue, care has to be taken not to injure the former, and the electrode has to be embedded firmly and deeply into the diseased tissue in order to avoid the epiglottis. The reaction is sometimes rather severe, lasting for several days, and ice-pellets and cocaine-spray may be employed to ease the patient. When the hypertrophic mass is lobular in shape, or so large as to enable its engagement in a snare, I consider it advisable always to snare it off. With the proper use of cocaine the elastic cautery-snare of iridium and platinum answers the purpose as well as the cold snare, is not more painful, and, creating a larger slough, is more thorough in its action.

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